

In the Claims:

Please amend Claims 1-3 as follows:

1. (Currently Amended) A device for perpendicular stratification of planary fibrous shapes, above all a fibrous web, with ~~two elements~~ a first element and a second element making synchronous and reciprocating motions and connected with a driving mechanism, characterized in that the ~~elements (1,2)~~ first element and the second element exerting a reciprocating motion are connected with the driving mechanism ~~(3)~~ indirectly over at least one robust shaft ~~(4)~~ rigidly fitted in bearings in a rigid framework of ~~the~~ a machine, while ~~one~~ the first element ~~(1)~~ is coupled to the shaft ~~(4)~~ rigidly or over first flexible joints ~~(6)~~, and a ~~the~~ second element ~~(2)~~ is coupled by means of second flexible joints ~~(7)~~ with the same shaft or with another shaft ~~(5)~~.

a/ 2. (Currently Amended) A device according to Claim 1, characterized in that the driving mechanism ~~(3)~~ consists of one driving shaft ~~(8)~~ with two crank assemblies ~~(9)~~ arranged with a phase shift to each other.

3. (Currently Amended) A device according to Claims 1 ~~and 2~~ characterized in that the flexible joints ~~(6) and (7)~~ consist of flat steel springs with width-to-thickness ratio more than 10.

Please add Claims 4-52 as follows:

4. (New) A device according to Claim 1, characterized in that at least one of the first element and the second element linearly reciprocate.

5. (New) A device according to Claim 4, characterized in that the first element and the second element linearly reciprocate.

6. (New) A device according to Claim 1, wherein the at least one robust shaft includes a first shaft coupled to the first element and a second shaft coupled to the second element.

7. (New) A device according to Claim 1, characterized in that the second flexible joint includes a sliding fitting.

8. (New) A device according to Claim 7, characterized in that the first flexible joint includes a sliding fitting.

9. (New) A device according to Claim 1, wherein the second flexible joint includes a member flexible in a first direction about an axis of the at least one robust shaft and inflexible in a second direction parallel to the axis.

10. (New) A device for perpendicular stratification of a web, the device comprising:
a first element configured to linearly reciprocate while deforming the web into a plurality of plaits including a first plait and a second plait; and
a second element configured to linearly reciprocate along a second axis substantially perpendicular to the first axis while moving the second plait towards the first plait.

11. (New) The device of Claim 10, wherein the first element is coupled to a shaft rotatable about an axis.

12. (New) The device of Claim 11 including at least one flexible joint between the first element and the shaft.

13. (New) The device of Claim 12, wherein the at least one flexible joint includes a tie rod and a knuckle joint coupled between the shaft and the first element.

14. (New) The device of Claim 12, wherein the at least one flexible joint includes a sliding fitting.

15. (New) The device of Claim 11 including a member flexible in a first direction about the axis and inflexible in a second direction parallel to the axis.

16. (New) The device of Claim 15, wherein the member comprises a flat spring.

17. (New) The device of Claim 16, wherein the spring has a width-to-thickness ratio greater than about 10.

18. (New) The device of Claim 11 including a driving mechanism coupled to the shaft.

19. (New) The device of Claim 18, wherein the driving mechanism includes:
a second shaft; and
a member pivotally and eccentrically coupled to the first shaft and the second shaft.

20. The device of Claim 12, wherein the second element is coupled to a shaft rotatable about an axis.

21. (New) The device of Claim 20 including at least one flexible joint between the second element and the shaft.

22. (New) The device of Claim 20, wherein the at least one flexible joint includes a tie rod and a knuckle joint coupled between the shaft and the second element.

23. (New) The device of Claim 20, wherein the at least one flexible joint includes a sliding fitting.

24. (New) The device of Claim 20 including a member flexible in a first direction about the axis and inflexible in a second direction parallel to the axis.

25. (New) The device of Claim 24, wherein the member comprises a flat spring.

26. (New) The device of Claim 25, wherein the spring has a width-to-thickness ratio of greater than about 10.

27. (New) The device of Claim 18 including a driving mechanism coupled to the first shaft.

28. (New) The device of Claim 27, wherein the driving mechanism includes:
a second shaft; and

a member pivotally and eccentrically coupled to the first shaft and the second shaft.

29. (New) The device of Claim 10, wherein the first element is coupled to a first rotatable shaft and wherein the second element is coupled to a second rotatable shaft.

30. (New) The device of Claim 29 including:
at least one first flexible joint between the first element and the first shaft; and
at least one second flexible joint between the second element and the second shaft.

31. (New) The device of Claim 30, wherein at least one of the first flexible joint and the second flexible joint includes a tie rod and a knuckle joint.

32. (New) The device of Claim 30, wherein at least one of the first flexible joint and the second flexible joint includes a sliding fitting.

33. (New) The device of Claim 30, wherein the first flexible joint includes a first member flexible in a first direction about the first axis and inflexible in a second direction parallel to the first axis and wherein the second flexible joint includes a second member flexible in a first direction about the second axis and inflexible in a second direction parallel to the second axis.

34. (New) The device of Claim 33, wherein the member comprises a flat spring.

35. (New) The device of Claim 34, wherein the spring has a width-to-thickness ratio of greater than about 10.

36. (New) The device of Claim 29 including a drive mechanism coupled to the first shaft and the second shaft.

37. (New) The device of Claim 36, wherein the drive mechanism includes:
at least one crank shaft;

a first member pivotally and eccentrically coupled to the first crank shaft and the first shaft; and

a second member pivotally and eccentrically coupled to a second element and the second shaft, wherein the at least one crank shaft facilitates advanced phase movement of the second element relative to the first element.

38. (New) A device for perpendicular stratification of a web, the device comprising:

a first shaft;

a first element coupled to the first shaft so as to reciprocate in response to pivoting of the first shaft about a first axis;

a second shaft; and

a second element coupled to the second shaft so as to reciprocate in response to pivoting of the second shaft about a second axis.

39. (New) The device of Claim 38 including a drive mechanism coupled to the first shaft and the second shaft, wherein the drive mechanism is configured to pivot the first shaft and the second shaft.

40. (New) The device of Claim 39, wherein the drive mechanism is configured to pivot the first shaft and the second shaft in phase with one another.

41. (New) The device of Claim 39, wherein the drive mechanism includes:

a first crank shaft coupled to the first shaft; and

a second crank shaft coupled to the second shaft.

42. (New) The device of Claim 38, wherein the first element reciprocates about an axis.

43. (New) The device of Claim 42, wherein the second element linearly reciprocates.

44. (New) The device of Claim 38, wherein the first element and the second element linearly reciprocate.

45. (New) The device of Claim 38 including a member coupled between the first shaft and the first element, wherein the member is flexible in a first direction about the first axis and inflexible in a second direction parallel to the first axis.

46. (New) The device of Claim 45 including a second member coupled between the second shaft and the second element, wherein the second member is flexible in a first direction about the second axis and inflexible in a second direction parallel to the second axis.

47. (New) The method for forming a voluminous product, the method comprising:

supplying a web;

linearly reciprocating a first element into engagement with the web so as to deform the web into a plurality of plaits including a first plait and a second plait; and

linearly reciprocating a second element into engagement with the second plait so as to move the second plait towards the first plait.

48. (New) The method of Claim 47, wherein the step of linearly reciprocating the first element includes pivoting a first shaft coupled to the first element.

49. (New) The method of Claim 48, wherein the step of linearly reciprocating a second element includes pivoting a second shaft coupled to the second element.

50. (New) The device of Claim 49, wherein the step of pivoting the first shaft and pivoting the second shaft includes rotating a first crank shaft coupled to the first shaft and a second crank shaft coupled to the second shaft.

51. (New) The method of Claim 50, wherein the first crank shaft and the second crank shaft are configured so as to reciprocate the first element and the second element, respectively, with a phase shift.

52. (New) The device of Claim 47, wherein the reciprocation of the first element and of the second element is at least 2,000 cycles per minute.